Physics 112 Formulae

$$v = \frac{\Delta d}{\Delta t} \qquad a = \frac{\Delta v}{\Delta t} \qquad v_f = v_i + a\Delta t$$

$$\Delta d = v_i \Delta t + \frac{1}{2} a t^2 \qquad \Delta d = V_f \Delta t - \frac{1}{2} a t^2 \qquad \Delta d = \frac{(v_i + v_f)}{2} \Delta t$$

$$v_f^{\,2} = v_i^{\,2} + 2ad \qquad F_{net} = ma \qquad F_{net} = F_{applied} - F_{friction} \qquad F_g = mg$$

$$F_f = \mu F_N \qquad F_{A\ on\ B} = -F_{B\ on\ A} \qquad F_{gy} = mg\cos\theta \qquad F_{gx} = mg\sin\theta$$

$$p = mv \qquad J = F\Delta t \qquad \Delta p = F\Delta t \qquad F\Delta t = mv_2 - mv_1$$

$$W = F_{||}\Delta d \qquad W = F\cos\theta\Delta d \qquad W = \Delta E$$

$$E_k = \frac{1}{2} mv^2 \qquad E_g = mg\Delta h \qquad E_e = \frac{1}{2} kx^2 \qquad F_a = kx$$

$$P = \frac{W}{\Delta t} \qquad P = \frac{\Delta E}{\Delta t} \qquad Eff = \frac{WorkOut}{WorkIn} x100 \qquad Eff = \frac{EnergyOut}{EnergyIn} x100$$

$$E_k + E_g + E_e = E'_k + E'_g + E'_e$$

$$v = f\lambda \qquad f = \frac{N}{\Delta t} \qquad T = \frac{\Delta t}{N} \qquad f = \frac{1}{T}$$